ALTEC LANSING

1270 POWER AMPLIFIER

OPERATING INSTRUCTIONS

CAUTION: *No user-serviceable parts inside. Hazardous voltage may be encountered within the chassis. Installation and Service information within this document is for use only by ALTEC sound contractors, factory authorized warranty stations and qualified service personnel.*

IMPORTANT: *Il est enjoint à l'utilisateur de ne pas réparer lui-même les pièces internes de l'appareil, des courants à haute tension pouvant passer à l'intérieur du châssis. Les renseignements inclus dans ce document sont destinés uniquement à l'usage des installateurs agréés des systèmes acoustiques ALTEC, des centres de réparation sous garantie autorisés, ainsi que du personnel d'entretien qualifié.*

INTRODUCTION

The ALTEC LANSING Model 1270 Power Amplifier provides continuous high power demand where uninterrupted operation is requisite. Designed to protect itself and the acoustic elements it drives, the Model 1270 represents 800 + watts of controlled power. Two channels may be operated independently, in parallel or in bridged configuration to deliver up to 400 watts per channel at less than 0.05% THD from 20 Hz to 20 kHz.

Peak Error Computer

The amplifier is provided with a peak/error computer that compares channel input and output signals and detects any output errors. Detection of any peak/error causes the appropriate peak/error indicator to illuminate. Output anomalies detected include excessive voltage, excessive current (load), excessive slew rate, and any other significant difference between the channel input and output signal.

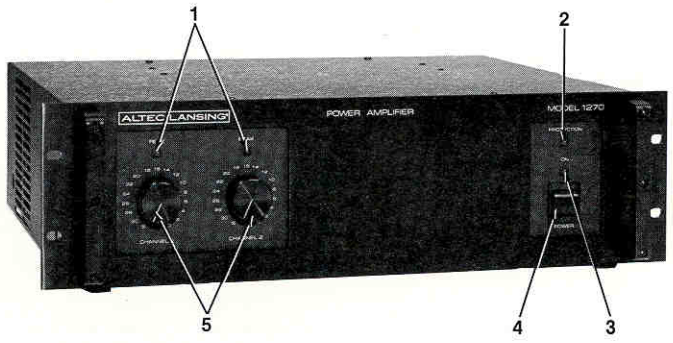
Amplifier Protection

The amplifier output is continuously monitored to guard against excessive current drain. An instantaneous VI limiter restricts output to 400 VA ±45° phase shift. The amplifier is additionally protected against excessive operating temperature; logic circuitry automatically overrides low-speed fan operation and locks to the high fan speed mode. If operating temperature remains excessive, the load is disconnected by a relay and the protection indicator illuminates. When temperature falls to safe operating conditions, the amplifier automatically resumes operation.

Load Protection

The load is protected from transients during startup and shutdown of the amplifier. During startup, the load remains disconnected through a relay during a three-second delay period. During shutdown or loss of power, the load is instantaneously disconnected by the relay. The load is similarly protected against amplifier failure, such as dc voltage at the output.

FRONT PANEL CONTROLS AND FEATURES



Item	Name	Function/Description
1	Peak/Error Indicators	Illuminate when excessive voltage, current or slew rate appears at the output terminals.
2	Protection Indicator	Illuminates when protection circuitry operates to prevent damage to the amplifier or load.
3	POWER Indicator	Illuminated when primary ac power is applied to the amplifier.
4	POWER Switch	Applies primary ac power to the amplifier.
5	CHANNEL Volume Controls	Adjust gain of LEFT and RIGHT channels. Rotate clockwise to increase gain.

INSTALLATION

Rack Mounting

The 1270 may be installed in a standard 19-inch equipment rack, or in the 42526 Shelf Mount Cover Accessory for shelf use. Vertical space required is 5¼". Rack installation is accomplished by using the appropriate four mounting screws supplied.

Ventilation

The 1270 must be adequately ventilated to prevent excessive temperature rise. Maximum rated ambient operating temperature is 55°C (131°F).

CAUTION

Do not block the side ventilation aperatures on either side of the main frame. Allow at least 2" on each side of the main frame to assure adequate ventilation. Do not operate within a completely closed, unventilated housing.

ELECTRICAL

120 Volt, 50/60 Hz Power Connections

Equipment supplied for domestic use is provided with the power transformer primary strapped for 120 volts. Specified voltage rating is located on the chassis, adjacent to the power cord. Verify that line voltage is in accordance with specified voltage **before** connecting the 1270 to ac line power.

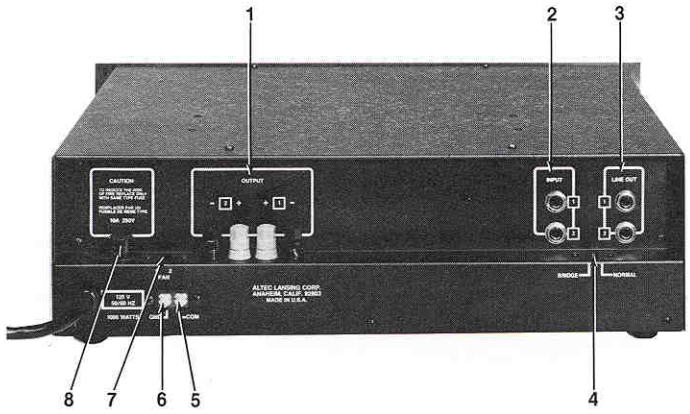
100V, 200V, 220V, 240V, 50/60 Hz Power Connections

Refer to Authorized Altec Service Representative.

Input Connections

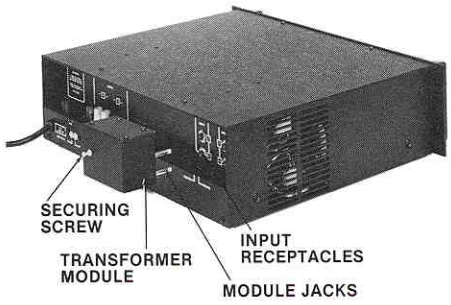
Unbalanced input connections to the INPUT jacks are made with shielded single-conductor cables terminated with standard ¼-inch phone jacks. In preparing the cable, the conductor is soldered to the tip of the jack, and the shield is soldered to the sleeve.

REAR PANEL CONTROLS AND FEATURES



Item	Name	Function/Description
1	OUTPUT Terminals	Connect left (L) and right (R) channels to corresponding speakers. Two pair of standard GR jacks have red (+) and black (–) polarity designations.
2	INPUT Receptacles	Accept cables from high impedance (nominal 15,000 ohms) sources. Use standard ring and sleeve plug for left (L) and right (r) receptacles.
3	LINE Receptacles	Accept cables to connect other Altec Amplifiers in parallel. Use standard ring and sleeve plug for left (L) and right (R) receptacles.
4	BRIDGE/ NORMAL Switch	Connects internal circuitry for independent or mono operation (NORMAL) into a 4-ohm load, of bridge operation (BRIDGE) into 8 ohms.
5	COM Terminal	Provides connection to circuit common.
6	GND Terminal	Provides connection to chassis ground.
7	FAN Switch	Selects low (1) or high (2) fan speed.
8	Fuse	Protects amplifier from excessive current drain. Replace only with same type 10-ampere fuse. Refer to qualified service personnel if fuse blows repeatedly.

Balanced input connections are made with the optional 1270TM Dual Balanced Transformer Input Module. Plug the 1270TM into the INPUT receptacles of the 1270 and secure the retaining screw. See Figure 1. Cables terminated with XLR3-type connectors are used to make input connections to the 1270 TM module; wiring for the XLR3-type connector is shown in Figure 2.



1b. Module Installed

Figure 1. Installation of 1270TM Module

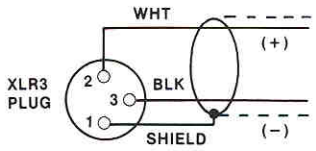


Figure 2. Wiring for XLR3-type Connector

Line Out Connections

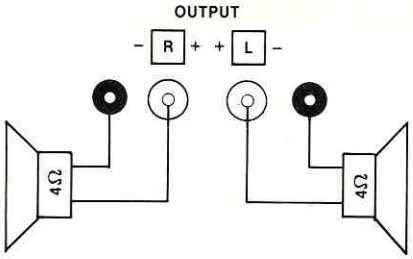
Connections to LINE OUT receptacles are made with shielded single-conductor cables terminated with standard ¼-inch phone jacks. When channels are operated independently (stereo operation) a cable must connect each channel of each additional 1270 amplifier connected in multiple. When channels are operated in the bridge mode, only the left channel of each additional 1270 requires a connecting cable.

Output Connections

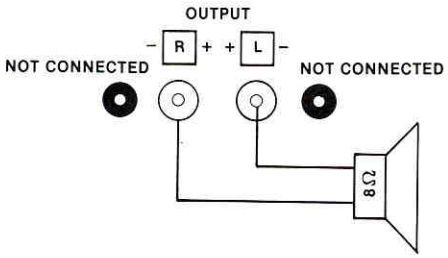
Output connections are made at the L and R OUTPUT terminals. Figure 3 illustrates connections for independent (stereo) operation and for bridged operation.

GND and COM Connections

The GND (chassis ground) and COM (electrical common) terminals are used to correct unsatisfactory grounding conditions and for establishing desired grounding configurations.



3a. Independent Operation of L and R Channels



CAUTION

Bridged operaton provides a true balanced output. Do not connect either side of the loudspeaker line to audio common or to any other "ground" connection.

3b. Bridge Operation of L and R Channels

Figure 3. Output Connections

STEREO (INDEPENDENT CHANNEL) OPERATION

1. After installation and hookup of connections as in Figure 3A, check that the BRIDGE/NORMAL switch is positioned at NORMAL, and that the LEFT and RIGHT CHANNEL volume controls are turned fully counterclockwise. (∞).

2. Set input signal level to the 1270 at a nominal value of 0.775V.

3. Turn on ac line POWER switch and note illumination of POWER indicator.

4. Turn LEFT and RIGHT CHANNEL volume controls clockwise until desired output power is obtained. If either LEFT or RIGHT peak/error indicator illuminates, reduce output level with channel volume control or reduce input level to 1270.

BRIDGE (MONO) OPERATION

1. After installation and hookup of connections as in Figure 3B, check that the BRIDGE/NORMAL switch is positioned at BRIDGE, and that the LEFT and RIGHT CHANNEL volume controls are turned fully counterclockwise (∞).

2. Set input signal level to the left (L) INPUT of the 1270 at a nominal value of 0.775V. (The right (R) INPUT is left unconnected.)

3. Turn on ac line POWER switch and note illumination of POWER indicator.

4. Turn LEFT CHANNEL volume control clockwise until desired output power is obtained. Be sure to leave RIGHT CHANNEL volume control fully counterclockwise. If LEFT peak/error indicator illuminates, reduce output level with LEFT CHANNEL volume control, or reduce input level to the 1270.